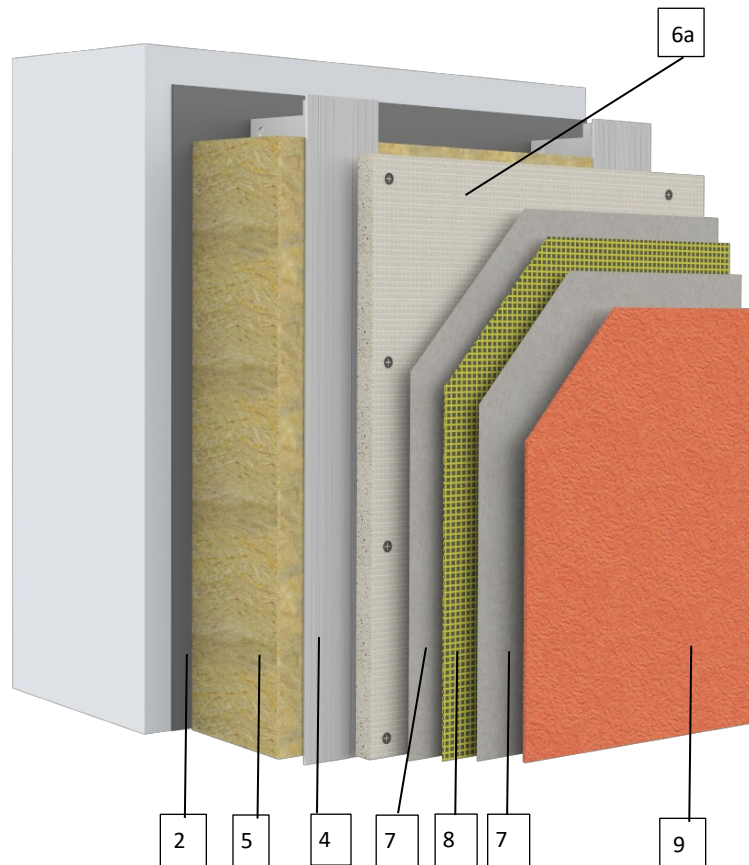**Sto Corp.**
Design No. STO/CWP 25-02
Exterior Wall Systems
StoVentec R, StoVentec C, StoVentec M, StoVentec S
CAN/ULC S134
Rating: Meets Requirements

1. **WALL ASSEMBLY:** Construct a wall assembly that shall comply with the local Building Code or other applicable regulatory requirements as established by the local Authority Having Jurisdiction.

2. **CERTIFIED MANUFACTURER:** Sto Corp.

   CERTIFIED PRODUCT: Weather Resistive Barrier

   Apply one of the following membrane systems, according to manufacturer's instructions, to the exterior side of the wall assembly.

A. STO FLEXYL – A cementitious air and moisture barrier trowel applied at a wet film thickness of 1.6 mm.

B. STOGUARD VAPORSEAL R – A fluid applied polymeric air, vapor, and moisture barrier, spray- or roller-applied in a two-coat process at a wet film thickness of 0.38 mm (15 mils) per coat.

C. STOGUARD – A fluid-applied polymeric Gold Coat (81636 or 80265) air and moisture

barrier applied in two coats at a wet film thickness of 0.25 mm (10 mils) per coat. Where applied over sheathing, joints are to be first treated with Sto Gold Fill and mesh reinforcement, or StoGuard RapidFill in accordance with Sto application instructions, or Sto RapidGuard. Joints may also be treated with application of Sto Gold Coat in conjunction with StoGuard Fabric.

3. **WALL BRACKETS:** (Not Shown) Install 2 mm stainless steel or min. 3 mm aluminum x 70 mm – 320 mm Sliding Point brackets and 2.5 mm stainless steel or min. 3 mm aluminum x 70 mm – 320 mm Fixed Point brackets. Brackets to be spaced and connected to supporting structure as required per Sto installation instructions and project design loads.

4. **VERTICAL PROFILES:** STO T-Profiles made of aluminum alloy EN AW 6063 Temper 6 or EN AW 6005A Temper 5, with 2.7 mm x 90 mm plate and 2.4 mm x 52.7 mm leg, in lengths to 3 m, are attached to the wall brackets (Item 3) using 5.5 x 19 mm stainless steel screws. Wall brackets to be positioned max. 280 mm from ends of STO T-Profiles. Spacing of T-Profiles typically 300 - 1200 mm as required by structural analysis.

5. **EXTERIOR INSULATION:** Install 600 mm wide x 1200 mm long x required thickness of mineral wool insulation onto wall using adhesively attached 16 GA impaling steel pins at min. five locations per 24 in. x 48 in. insulation section. Pins must be 0.5 – 1 in. longer than thickness of insulation being installed. One steel pin installed at each corner of the insulation section and one steel pin installed at the approximate center. Alternately, pins are at steel stud locations and secured to the studs using one #10 x 1-3/8 in. self-tapping bugle-head screw per pin base. Screws are 3/8 in. longer than the combined sheathing and stud thickness.

Owens-Corning® Thermafiber Rain Barrier 45 or mineral wool insulation complying with ASTM C612 and CAN/ULC-S114 with density range from 3.5 lb/ft^3 to 6.0 lb/ft^3 (72 kg/m^3 to 96 kg/m^3). Thickness shall be no less than 50 mm. Thickness shall be based on depth of wall brackets with insulation being max. 20 mm less than wall bracket depth. Cavity when measured from the face of the insulation to the inward facing side of the Ventec panel is between 10 and 60 mm (max).

INSULATION AT INTUMESCENT LOCATIONS ABOVE OPENINGS – Based on depth of cavity (substrate to inward facing side of the Ventec Panel or Exterior Face of T-Profile depending on header protection method), cut 4 in. thick, 24 in. x 48 in., 6 lb./ft^3 density mineral fiber insulation so to produce a lamella strip which extends from the substrate to within 30 mm, but no closer than 15 mm from the inward facing side of the panel. Install above windows, extending 4 in. either side of the window using #12 self-tapping sheet metal screws for metal framing or appropriate masonry type anchor (length as required), spaced nominally between 32 in. and 48 in. oc, using two screws per location. On the face of the lamella, install the Roku Intumescent Strip (100 mm tall and 2 mm thick and supplied in rolls, 75 to 150 ft. in length). Intumescent strip to be fastened back to the underlying support structure at every stud.

6. **CERTIFIED MANUFACTURER:** Sto Corp.

    CERTIFIED PRODUCT: StoVentec Rainscreen Cladding System

    CERTIFIED SYSTEMS: StoVentec R, StoVentec C, StoVentec M, StoVentec S

    Systems consist of base coats (Item 7) and reinforcing mesh (Item 8) field applied to 12 mm StoVentec Carrier Board A+ (Item 6a), provided

in various widths and lengths to suit project requirements, attached directly to the T-Profiles (Item 4) using 4.8 x 35 mm or 5.5 x 24 mm stainless steel screws. Spacing varies depending on required wind load resistance. Subframe components (T-Profiles and Wall Brackets) are furnished by Sto Corp. Finish materials (Item 9) are applied over the base coat.

The air gap between the insulation and back of Carrier Board A+ (Item 6a) may be between 10 and 60 mm.

7. **CERTIFIED MANUFACTURER:** Sto Corp.

CERTIFIED PRODUCT: Base Coat

CERTIFIED MODEL: Sto Primer/Adhesive, Sto Primer/Adhesive-B, Sto BTS Plus, StoCast Wood Adhesive, or Sto Armat Classic Plus Base Coats.

Apply one of the following base coats over the StoVentec Carrier Board A+ (Item 6a).

a. STO PRIMER/ADHESIVE, STO PRIMER / ADHESIVE-B, STO BTS SILO, OR STO BTS PLUS – Embed Sto Mesh (Item 8) in the base coat. Apply a second layer of the base coat to thoroughly cover the mesh. The final base coat dry thickness measures 1.6mm, or thicker where additional layers of mesh are applied.

b. STO ARMAT CLASSIC PLUS – Apply a first layer and embed Sto Mesh (see Item 8) in the base coat. Apply a second layer of the base coat to thoroughly cover the mesh. The final Sto Armat Classic Plus dry thickness measures 3 mm to 5 mm.

8. **CERTIFIED MANUFACTURER:** Sto Corp.

CERTIFIED PRODUCT: Reinforcing Mesh

CERTIFIED MODEL: StoGuard Mesh, Sto Mesh, StoGuard Fabric

a. Embed Sto Mesh nominal 4.5 oz/yd^2 (152 g/m^2) into the applied base coat (Item 12).

b. Mesh overlaps shall be min. 2-1/2 in. (64 mm).

c. Additional layers of mesh may be installed for increased impact resistance. Where Sto Armor Mat 15 Mesh (nominal 15 oz/yd2 – 425 g/m^2) is used, it is to be embedded in a certified base coat (Item 7) prior to application of base coat and Sto Mesh. Alternatively, StoArmat Classic Plus and Sto Mesh may be applied over Sto Base Coat (Item 7) and Sto Armor Mat 15. Sto Mesh overlaps as noted in Item 8b. Where the base coat (Item 7) application includes Sto Mesh, the Sto Armat Classic Plus may be applied without additional mesh before use of a certified finish coat (Item 9).

9. **CERTIFIED MANUFACTURER:** Sto Corp.

CERTIFIED PRODUCT: Finish Materials

A. **CERTIFIED SYSTEM:** StoVentec R

Apply one of the following finish coats, according to manufacturer's instructions, over the dried certified base coat (Item 7) to achieve final texture.

a. STOLIT, STOLIT X, STOLIT MAX, STOLIT LOTUSAN, STO ELEMENT, STO ESSENCE DPR, STO TEXTURED FINISH, STOSILCO LIT – Trowel-applied ready-mixed acrylic based finish coat. The applied thickness is governed by the aggregate size (1 mm – 3 mm).

Optionally apply Sto Primer to the prepared base coat (Item 7) prior to finish application as per the manufacturer's instructions.

NOTE: Stolit finishes are also used to produce StoCreativ Brick.

b. STO-ECOSHAPES – Trowel-apply the Sto Bonding and Pointing Mortar over the dried certified base coat (Item 7). Press Sto-EcoShapes (preformed acrylic rendered shapes which simulate brickwork or other patterns) into the Sto Bonding and Pointing Mortar per Sto's instructions. The Sto-EcoShapes may have a nominal thickness of 4 mm – 8 mm.

c. STOCAST WOOD – Apply StoCast Wood Adhesive to Intertek certified base coat (Item 5) using a 6 x 6 mm notched trowel, application weight 2.5 – 3.5 kg/m^2. Apply 200 x 16 cm, nominal 2mm thick, StoCast Wood horizontally across wall, with 5 – 10 mm spacing between adjoining pieces. Press StoCast Wood into the adhesive using a rubber roller. Once StoCast Wood Adhesive has dried, two coats of StoAqua Top Stain glaze or one coat of StoTique are applied over the wall. Once dried, a single coat of Sto Clear Coat is applied.

B. **CERTIFIED SYSTEM:** StoVentec C, StoVentec M, StoVentec S

Apply StoColl KM adhesive with a floating-buttering method, according to manufacturer's instructions, over the dried base coat (Item 7) to achieve an application weight of 3.5 to 4.5 Kg/m^2.

a. STOVENTEC M – Glass Mosaic Tiles, 4 to 10 mm thick.
b. STOVENTEC S – Natural Stone Tiles, 4 to 15 mm thick.
c. STOVENTEC C – Glazed Ceramic/Brick Slips, 4 to 15 mm thick.

Immediately after applying StoColl KM adhesive, lightly press the tiles to the adhesive. After curing of the adhesive for a min. of 14 days, and according the manufacturer's instructions, apply StoColl KM-S pointing mortar to tile joints.

10. **FIRE BREAKS:** Provide firestopping as required by Code. Firestopping is to be installed at floor lines or every 3 m vertically whichever occurs first. Vertical firestopping to be installed at max. intervals of 20 m, or less where Code or design requires.

11. **EXPANSION JOINT SYSTEM:** Expansion joints may be open (dry) or treated as Sto's installation instructions.

12. **OPENING HEAD AND SILL PROTECTION: (**Not Shown) Fenestration header openings to be protected as described in Item 5. Header and sill flashing min. 26 GA metal.

NOTE: Flashings may be ventilated.

13. **OPENING JAMB DETAIL:** (Not Shown) Min. 26 GA steel jamb installation detail to bridge the gap from opening to edge of panel.

Consult the listing report on the Directory of Building Products (https://bpdirectory.intertek.com) for the edition of the standard(s) evaluated.

Compliance of the assembly described in this Design Listing with the referenced standard relies on verification that the assembly constructed in the field is consistent with that described herein. Intertek certified products may be verified by the approved Intertek label; other products must be verified by the Authority Having Jurisdiction as meeting the specifications stated herein.